



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,942	06/22/2001	Hayao Watanabe	Q43872	7069

7590

04/29/2003

Sughrue Mion Zinn Macpeak & Seas PLLC  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3213

EXAMINER

TAMAI, KARL I

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/885,942

**Applicant(s)**

WATANABE ET AL.

**Examiner**

Tamai IE Karl

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24, 31-33 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 31-33 and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Reissue Applications***

1. The original patent, or a statement as to loss or inaccessibility of the original patent, must be received before this reissue application can be allowed. See 37 CFR 1.178.

### ***Oath/Declaration***

2. The reissue oath/declaration filed 2/21/03 has been entered into the file wrapper and the objection to the oath as being defective is withdrawn.

### ***Recapture***

3. The rejection of Claims 25-42 under 35 U.S.C. 251 as being an improper recapture is withdrawn.

### ***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the optical encoder and the magnetic encoder must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. The rejection of Claims 31, 32, and 33 under 35 U.S.C. 112, first paragraph and second paragraph, are withdrawn, from the prior office action.

7. Claims 31-33 and 37-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 31-33 and 37-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

The specification does not enable or contain a full, clear, concise, and exact written description of an encoder as a displacement measuring means. The only disclosure in the specification for an encoder is a comparison with reluctance resolver with the magnetic and optical encoder as recited in col. 14, lines 41-63. The magnetic and optical encoders are not disclosed as part of the invention, and the specification teaches away from the use of the optical and magnetic encoders.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 31, 32, 37, and 38 are rejected under 35 U.S.C. 102(b) as anticipated by Applicant's Admitted Prior Art (AAPA) or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Applicant's Admitted Prior Art (AAPA) in view of Hofmeister (WO 94/23911). AAPA teaches a plurality of actuators with stators hermetically sealed behind non-magnetic material, with roller bearings supporting the rotors. AAPA teaches a reinforcing means for the wall being the portion of the wall which expands radially outward to the coil endturns when the wall is axially outside the air gap between the rotor and stator. The reinforcing wall being the same material as the wall between the rotor and stator. The roller bearings being on opposite sides of the wall between the stator and rotor. AAPA shows but does not describe optical encoders below bearing 219. Hofmeister shows that the encoders shown in AAPA are optical encoders 13, 14. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motors of AAPA with the optical encoders of Hofmeister to control the drive motors.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 31, 32, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) and Cametti (US 2,887,062), and Hofmeister (WO 94/23911). AAPA teaches a plurality of actuators with stators hermetically sealed behind non-magnetic material, with roller bearings supporting the rotors. AAPA teaches a reinforcing means for the wall being the portion of the wall which expands radially outward to the coil endturns when the wall is axially outside the air gap between the rotor and stator. The reinforcing wall being the same material as the wall between the rotor and stator. The roller bearings being on opposite sides of the wall between the stator and rotor. AAPA shows but does not describe optical encoders below bearing 219 or teach the sealing wall being non-magnetic metal. Hofmeister shows that the encoders shown in AAPA are optical encoders 13, 14. Cametti teaches the sealing wall and supports being non-magnetic stainless steel. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motors of AAPA with the optical encoders of Hofmeister to control the drive motors, and the non-magnetic wall being stainless steel to provide good weld connections when making the hermetic motor.

12. Claim 33 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) and Cametti and Hofmiester, in further view of Jacquin (FR 2,527,854). AAPA Cametti and Hofmiester teach every aspect of the invention except a magnetic encoder. Jacquin teaches the equivalence of magnetic and optical encoders for controlling motors across a sealed enclosure. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of AAPA, Cametti, and Hofmeister with the magnetic encoder to provide remote commutation of the stator coils which protects the encoder and because it is within the ordinary skill in the art to choose between known equivalents.

***Allowable Subject Matter***

13. Claims 1-24 are allowed.

***Response to Arguments***

14. Applicant's arguments with respect to claim 33-35 and 37-39 have been considered but are moot in view of the new grounds of rejection.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Karl I Tamai  
PRIMARY PATENT EXAMINER  
April 25, 2003

  
KARL TAMAI  
PRIMARY EXAMINER